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ABSTRACT

This report summarizes research literature on multiage classrooms, explaining how they operate, and describes a study of a low-performing, predominantly Native American school district which adopted multiage classrooms as its primary reform strategy. District teachers completed surveys about: planning; collaboration; student groupings and interactions; assessment; planning resources; preparedness; faculty development; perceptions about the effects of multiage classrooms and looping on student learning; opinions on advantages and disadvantages of multiage classrooms and looping; and suggestions for improving instruction and learning. Researchers observed 37 classrooms and interviewed principals and district administrators. They also collected data from a comparison school in a neighboring district that had successful multiage grouping. Teachers were dissatisfied with how multiage classrooms were mandated by district administrators. The mandate created camps of teachers divided over the issue. Teachers tended to feel incompetent, requesting more training and development. Teachers mentioned needing more materials and resources for these classrooms. They did not feel prepared to teach multiage classes. Little time was devoted to teacher collaboration, though it was considered important. Strong support from principals was important. Administrators believed the multiage approach had potential for reform of instruction. Three appendixes present study letters, forms, and surveys. (Contains 32 references.) (SM)

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Instructional Practices and Implementation Issues in Multiage Classrooms

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PREFACE

In the current educational context of standards-based reform and high-stakes accountability, district leaders are eager to identify strategies that can increase student learning, particularly in those districts where the majority of students are low-performing on achievement tests. In such districts, there are many needs in both instruction and curriculum, and leaders often have difficulty deciding where to start. One reform in instruction that has received varying amounts of attention during the last 30 years is the nongraded school or multiage approach. The purposes of this report are (1) to summarize the research literature on multiage classrooms; (2) to describe a study of a low-performing school district which adopted multiage classrooms as its primary reform strategy; (3) to discuss the implications of the findings for implementing multiage programs, and (4) to inform educators and researchers about nongradedness as a reform strategy. The intended audience for this report is educational researchers, and school and district administrators who are interested in nongraded approaches to K–8 classroom instruction.

The first section of the report provides an explanation of how multiage classrooms operate and describes research on the effects of using such an approach. The second section describes the method used for McREL's study of multiage classrooms in one district in the Central Region; and the third section details the results that were obtained. In the fourth section, a discussion of the results and their implications is provided.

PRIOR RESEARCH AND PERSPECTIVES

The multiage classroom is not a new concept in American education. Early schools usually consisted of one room where students' developmental stages ranged from early childhood through adolescence. In some rural parts of the United States, such schools are still in operation. What is new is the deliberate mixing of students of different ages in a classroom to obtain educational benefits which are not available in the single grade classrooms that currently predominate in American schools. An understanding of these benefits first requires an understanding of the approach.

Features of Multiage Classrooms

In a multiage classroom, children of different ages form one class which spans a minimum of two grade levels. The critical features are that instruction and curriculum are integrated, and cross-grade teaching is the norm (Lloyd, 1999). This contrasts with the multigrade or combination class in which students from two or more grades are each taught a separate grade-specific curriculum. "Nongraded" is the adjective given to multiage classrooms and to programs that do not recognize grade separation or organize educational activities by grades. For example, a nongraded primary program might have multiage classrooms that span grades one through three. A well known resource on this approach is Goodlad and Anderson's *The Nongraded Elementary School* (1987). The authors support multiage, nongraded schools as a way to reorganize instruction using vertical progression. This means that students move in a continuous upward progression without breaks for failure and class repetition.

When describing multiage classrooms, some educators include other features in addition to the mixed age format. Pavan (1992) indicated that multiage classrooms generally involve a team of teachers who work with a team of students who are grouped in various ways depending on the task and on students' interests and needs. Many multiage classrooms also participate in "looping" a practice in which students stay together with the same teacher(s) for the length of the grades that the class spans (Kasten & Lolli, 1998). For example, in a looped multiage classroom covering grades three through five, students would stay with the same teacher(s) for three years.

Kasten and Lolli (1998) commented that a classroom is multiage when it is a "single learning community that meets the academic, social, emotional, physical, and aesthetic needs of its members" (p. 3). Thus, unlike combination or multigrade classes which usually are formed for administrative reasons such as overcrowding or low enrollments (Lodish, 1992), multiage classrooms are based on a particular philosophy about pedagogy. According to Anderson and Pavan (1993), who are champions of the approach, nongradedness includes the following aspects:

- variability in instruction in response to students' individual differences;
- student learning that is designed to be both challenging and pleasurable;
- nurturing of all spheres of a child's development–cognitive, physical, aesthetic, social, emotional;
- flexible and heterogenous student groupings;
- student progression that is flexible and individually paced;
  both separate and integrated areas of curriculum with an emphasis on outcomes rather than content coverage;

- clearly defined outcomes but with varying times and paths used by students to reach the outcomes;
- subordination of specific content learning to the understanding of major concepts and the development of learning skills;
- holistic student assessment;
- continuous diagnostic assessment primarily in relation to the student's history and potential (rather than grade); and,
- learning opportunities and instructional strategies that are teacher (rather than system) managed. (see pages 62–63)

Thus, true multiage classrooms have many more features than just groups of students who are of different ages and from different grades. There are also implied beliefs by educators about student learning and effective pedagogical practices. As Goodlad and Anderson (1987) commented, "the nongraded school is the school we could have if insights from research on learning and human development were applied" (p. 225).

Research on the Effectiveness and Benefits of Multiage Classrooms

A review of research on multiage classrooms is complicated by the different ways that "multiage" has been operationalized and by the use of varying measurements. Nonetheless, there have been many studies which have compared the effectiveness of multiage classrooms with that of single grade classrooms as well as several reviews of these studies. Pavan (1992) reviewed 64 research studies published between 1968 and 1990 that examined various nongraded programs. The author summarized the findings as follows:

1. Research studies comparing nongraded and graded schools provide a consistent pattern favoring nongradedness.
2. The nongraded groups performed better (58% [of the studies]) or as well as (33%) the graded.
3. On mental health and school attitudes, 52% of the studies indicated nongraded schools as better for students, 43% similar. Only 5% showed nongraded as worse than graded schools.
4. The benefits to students of nongradedness increase as students have longer nongraded experiences.
5. Blacks, boys, low socioeconomic level students, and underachievers benefit from a nongraded program. (p. 23)

Other reviewers have supported the general conclusion that compared to students in single grade classrooms, students in multiage classrooms perform the same or better in academic areas, and also Pavan's finding that they are consistently better in affective areas such as self-esteem (Miller, 1989; Veenman, 1995).

The benefits of multiage classrooms are related primarily to the way that instruction is organized. According to Stone (1998), vertical cross-grade student groupings in multiage classrooms provide both cognitive and emotional benefits. The author noted that compared to single grade classrooms, children in multiage classrooms are more likely to experience Piagetian (1976) cognitive

conflicts and Vygotsky's (1978) zone of proximal development, both of which benefit learning. Stone also stated that socially, children have more opportunities for leadership, and the cooperative environment of a multiage classroom promotes emotional stability.

Kasten and Lolli (1998) emphasized the following benefits from developmentally appropriate practices in multiage classrooms, as demonstrated by research. Older, more advanced children reap cognitive benefits from cross-age tutoring. Younger children feel emotionally comfortable in multiage classrooms because the setting resembles a natural family structure where there is a mix of ages and opportunities for learning from modeling. Students can experience continuous progress without unnatural breaks for grade promotion or retention. In Kasten and Lolli's view, graded classrooms are the result of industrial thinking with its emphasis on uniformity rather than on what is developmentally appropriate. The authors contend that the use of grade levels in schools is perpetuated by publishers of grade-level materials which schools adopt as the curriculum rather than as tools for a curriculum (p. 7).

Theilheimer (1993) stressed that children's uneven cognitive and social development make the different levels in a multiage classroom adaptive. The author agreed with Stone (1998) that cognitive conflicts occur during problem solving when children of different ages interact, and these conflicts stimulate cognitive growth. Kommer (1999) also used a developmental perspective in arguing for multiage teams for the middle grades. Kommer cited evidence that older students enjoy developing leadership in such a setting. In addition, because mixed-age teams of students and their teachers stay together for the three-year span of middle school, there is a consistency which promotes positive student attitudes. This consistency is also a benefit of looping which many multiage classrooms practice. Looping is considered a developmentally appropriate practice which increases students' confidence and improves parent-teacher relationships (Little & Dacus, 1999).

Guiterrez and Slavin (1992) reviewed research on student achievement in nongraded elementary schools, but they suggested that the effects depended on the type of program. They found that the most positive effects occurred for simpler forms of nongrading such as cross-grade groupings for reading. Programs that were multiage and emphasized completely individualized instruction were not more beneficial than graded programs. In response to Pavan's (1992) review, Slavin (1992) concluded that "nongraded organization can contribute to instructional effectiveness, but the curriculum and instructional methods used within a nongraded framework are as important as the school organization plan in determining the ultimate effects" (p. 24).

In commenting on multiage research, McLauglin, Irvin, and Doda (1999) pointed out that the subject areas of reading and language seem to benefit the most from nongradedness. Kasten and Lolli (1998) reported on research that included some qualitative measures of reading and writing (Kasten & Clarke, 1993). Compared to students in single grade classrooms, children in multiage classrooms had more positive attitudes toward recreational reading, were more articulate about books, and produced more complex writing samples.

Other researchers of nongraded approaches have cautioned readers on the interpretation of findings. Lloyd (1999) suggested that multiage classrooms are favorable for gifted children because teachers are more likely to recognize diversity and provide developmentally appropriate learning opportunities. However, Lloyd acknowledged that it is not the grouping *per se* that is beneficial, but

rather that "teachers who are committed to such an organization are likely to change their way of teaching" (p. 197). Similarly, Osin and Lesgold (1996) indicated that it is difficult to separate multiage effects from the global changes in experiences that occur when a school adopts nongradedness in both philosophy and practice.

Research on Multiage Implementation Issues

In another discussion of mixed-age grouping, Lodish (1992) agreed that there are many benefits for students, but also cited the following disadvantages:

- Teachers may have the tendency to provide fewer challenges for older compared to younger children.
- Younger children may be frustrated by the gap between their work and that of older students.
- Scheduling for students to work with individual teachers can be difficult.
- Teachers need more time for instructional planning due to the wide range of students. (see p. 22)

Thus, while there seem to be many benefits of nongraded schools and multiage classrooms, there also are challenges to implementing the approach as Lodish's (1992) descriptions of disadvantages suggest. Miller (1996) commented that implementing a multiage program is a journey in which participants must address teacher readiness, promote staff ownership, involve parents, and plan collaboratively. Miller stressed that teachers need both emotional and cognitive support for the changes in their instruction that mixed-age grouping will require. For Miller, the school principal is key in providing this support for teachers. By having his or her own strong vision about children's learning, the principal can help create a positive school climate for changing to a multiage approach. The principal also must lead efforts to garner parental and community support for the change.

There are many practical issues to consider when implementing multiage classrooms. As Gaustad (1995) described, teachers need a wider range of instructional strategies compared to what they need for single grade classrooms. They must be able to facilitate positive group interactions, to design different kinds of student learning groups, to work together with other teachers on a team, and to know many developmentally appropriate practices such as cooperative learning and thematic teaching. Gaustad also emphasized the role of the school principal who must support and empower teachers as they develop multiage practices. To do this effectively, the principal needs "sophisticated leadership and interpersonal skills" (p. 2). The principal especially must strive to maintain a sense of community within the school to avoid a division of teachers into camps of those for and against multiage practices.

ERS Spectrum (1995) conducted teacher interviews to provide the perspectives of teachers who had implemented one multiage program. The teachers' comments were summarized as follows:

- Teachers need to prepare for the change, but it should be eased into without changing everything at once.
- Multiage grouping is not an end in itself but rather a total instructional approach with the goal of meeting students' individual learning needs.

- Multiage grouping requires much teacher time and effort accompanied by administrative support.
- Team teaching is essential, and it requires much work and time to be effective.
- Not everything is new; many previously mastered instructional strategies are effective in multiage classrooms. (see p. 11)

The teachers in this study also noted that they had planned for one year before switching to a multiage program, although others have suggested that at least two years should be devoted to planning (e.g., Surbeck, 1992).

Summary of Prior Research

As Anderson and Pavan (1993) indicated, there is much more to nongradedness than a reorganization of students and classrooms. Compared to single grade classrooms, the multiage approach is based on fundamentally different ways of viewing development and learning. For nongraded classrooms to be advantageous to students, teaching and administrative staff as well as parents must support this view. On the basis of research and writings on the benefits of nongradedness, school districts are turning to multiage approaches. But, as Gaustad (1994) emphasized, it is the instructional quality in multiage classrooms that is the key to success.

METHOD

This study evolved from a research partnership between Mid-continent Research for Education and Learning (McREL) and the Monroe School District (MSD). MSD (pseudonym) is located on an American Indian reservation in the Midwest. Almost all MSD students are Native American (99%) and of low socioeconomic status, with 75% eligible for federal free/reduced lunch benefits. The district serves approximately 1,100 students in four K–8 schools with 96 teachers (including special education).

At the time of the study, MSD was in its third year of implementation of multiage reform. Due to low student achievement (among the 10 lowest districts in the state), the district superintendent had mandated the change to multiage classrooms as a way to drastically reorganize instruction. Along with this change, teachers were asked to discontinue using student textbooks in their instruction due to the graded nature of these materials. At the end of the second year of implementation, district officials had questions about whether to continue multiage classrooms in the future. The principal and teachers at one of the four schools had been reluctant to change to multiage classrooms, and at the time of this study had already reverted to single grade classrooms. Although the study described in this report is primarily descriptive, the situation allowed a comparison of the two classroom approaches. However, any comparison is tempered by the fact that teachers were not randomly assigned to the type of classroom.

Design and Instruments

A district/McREL design team that was formed for the research partnership jointly planned the study. MSD members of the design team included four teachers, two principals, and the director of special education. The purposes of the design team study were to identify classroom practices that were occurring in the district and to obtain information on issues related to implementation of multiage classrooms. The study used three sources of data: a survey of teachers' instructional practices, which was the primary data source; classroom observations; and, administrator interviews.

The design team developed a teacher survey to measure how multiage practices were being implemented and to obtain teachers' perceptions of their classroom practices and multiage classrooms. Design team members first discussed the different components of instruction that should occur if the multiage approach is being fully implemented. To guide their discussion, the design team used Innovation Configuration Mapping (Hall & Hoard, 1987), an activity which facilitates the identification of essential components of an innovation and the variations in implementation that are possible for each component. Design team members then wrote survey questions that asked teachers about the presence of these components in their instruction.

The resulting Instructional Practices Survey had 31 multi-part questions which asked teachers about time devoted to planning, degree of collaboration with other teachers, types of student groupings for instruction, types of student interactions, use of assessment techniques, resources used for planning instruction, perceptions of preparedness, staff development experiences, and perceptions about the effects of multiage classrooms and looping on student learning. There was also a question about the degree of multiage characteristics in the teacher's classroom practices. This question was based on principles of nongradedness identified by Anderson and Pavan (1993). The instructional

Practices Survey concluded with open-ended questions which asked for teachers' opinions about the advantages and disadvantages of multiage classrooms and looping and for suggestions for improving instruction and student learning in the district. (See Appendix A for the Instructional Practices Survey and the teacher consent form.)

McREL staff wrote the protocols for the classroom observations and the administrator interviews. Both were designed to enhance the information collected from the Instructional Practices Survey. The classroom observation protocols addressed general features of the classroom, opportunities for student learning, curriculum and instruction, student interaction, and student assessment. The interview protocols asked administrators about classroom organization, professional development, improving teaching and learning, curriculum, instruction, standards, family and community, and tribal culture. (See Appendix B for the classroom observation protocol and Appendix C for the administrator interview protocols.)

Procedures and Participants

The sample of survey respondents was comprised of 76 MSD teachers. The sample included most of the classroom teachers in the district, and there was representation from each of the four schools. The author administered the Instructional Practices Survey to teachers at a group staff meeting at each school. The four staff meetings were held over a three-day span in December, 1999. Each teacher completed an informed consent form which explained the purpose of the study and that individual results would be kept confidential.

Multiage classrooms covered three-year grade spans: K–2, 3–5, and 6–8. All the teachers in single grade classrooms were at a school in which the principal had decided to discontinue multiage classrooms. For statistical comparisons, teachers of single grade classrooms were grouped in the same grade spans as teachers of multiage classrooms. For example, single grade teachers for grades three, four, or five were grouped together because they were teaching similar ages of students as the teachers of multiage classrooms for grades 3–5. Special education teachers (12) and other certified staff such as counselors (15) also completed the survey but because many questions were inapplicable to these participants, their responses were included only for the analyses regarding staff development and for the open-ended questions.

McREL staff conducted classroom observations in 37 classrooms, including in each grade level at each school. Teachers gave their consent to be observed after being informed about the purpose of the study and the observations and that individual data would be kept confidential. All the classroom observations were conducted over a five-day span in January, 2000.

Six MSD principals and three district administrators, including the superintendent, were interviewed over a two-day period in December, 1999. Interviewees gave their consent to participate after being informed about the purposes of the study and the interviews and that the interviews would be tape recorded. They also were informed that results would not attribute comments to specific individuals.

For the final part of the study, data were collected from a comparison school in a neighboring school district. The MSD superintendent had visited this school and was impressed with how the

multiage approach was being implemented. The principal of the school was interviewed, and seven teachers of multiage classrooms at the school completed the Instructional Practices Survey. The purpose for including this school in the study was to provide additional information on implementation issues related to the multiage approach. Students in the comparison school are 85% white, 9% Native American, and 22% of the students are eligible for federal free/reduced lunch benefits. The school has a total of 26 teachers.

RESULTS

The results are organized into four categories: classroom and teacher characteristics, classroom practices, implementation issues, and comparison school results. The primary source of data is the teacher Instructional Practices Survey. Most of the statistics reported are descriptive in nature. However, to determine the statistical significance of differences among teachers' responses to the Instructional Practices Survey, Multivariate Analyses of Variance (MANOVA) were performed for categories of related questions on the survey. For all MANOVAs, the between-subjects variable was the teacher's type of classroom (multiage or single grade)[1]. To simplify reporting of these results, only the probability levels are indicated for differences that are statistically significant.

Classroom and Teacher Characteristics

The information reported in this section is based on teachers' responses to the Instructional Practices Survey.

Classroom structure. Table 1 indicates the grade level and the classroom type for the sample of 76 MSD teachers who responded to the Instructional Practices Survey. (All the single-grade teachers were at one of the four schools in the district.)

Table 1
MSD Teacher Respondents to Instructional Practices Survey

Classroom Type	Grade Level			Total
	K–2	3–5	6–8	
Single Grade	5	6	6	17
Multiage	26	19	14	59
Total	31	25	20	76

In the sample of 76 regular teachers, 59 teachers reported being in a multiage teaching arrangement and 17 teachers reported teaching single grade classrooms. Approximately 67% of the respondents said they are looping with their students for either two or three years. With regard to participation in team teaching, teachers described their classrooms as single grade teaming ($n = 6$), single grade not teaming ($n = 11$), multiage teaming ($n = 28$), or multiage not teaming ($n = 31$).

Teacher characteristics. Respondents' median number of years teaching experience was 9.5 and the median number of years teaching in MSD was 3 years. Teachers in single grade

[1]To determine whether effects of classroom type were related to student grade level, MANOVAs also included grade level as a between-subjects variable. However, there were no statistically significant interactions between classroom type and grade level obtained for any of the measures reported. Significant main effects of grade levels are indicated in the text.

classrooms had more years of teaching experience and had taught longer in the district (*M*s = 17.73 and 11.27) than teachers in multiage classrooms (*M*s = 10.07 and 5.33), and the differences were statistically significant (both $p < .03$).

Approximately 52% of the teachers reported having two hours or less for instructional planning per week during regular school hours, and 25% said they have 2–4 hours. Two-thirds have an hour or less for collaboration with other teachers during regular school hours. Outside of school, 55% use five or more hours for instructional planning, and most (59%) reported no collaboration with teachers outside of regular school hours. Single grade teachers reported having more planning time during school ($M = 4.26$ hr, $SD = 2.70$) and using less planning time outside of school ($M = 5.15$ hr, $SD = 2.92$) compared to multiage teachers ($M = 2.47$ hr, $SD = 1.78$ & $M = 7.12$ hr, $SD = 3.35$, respectively). Despite the high amount of variability, these differences between single grade and multiage classrooms were statistically significant ($p < .05$).

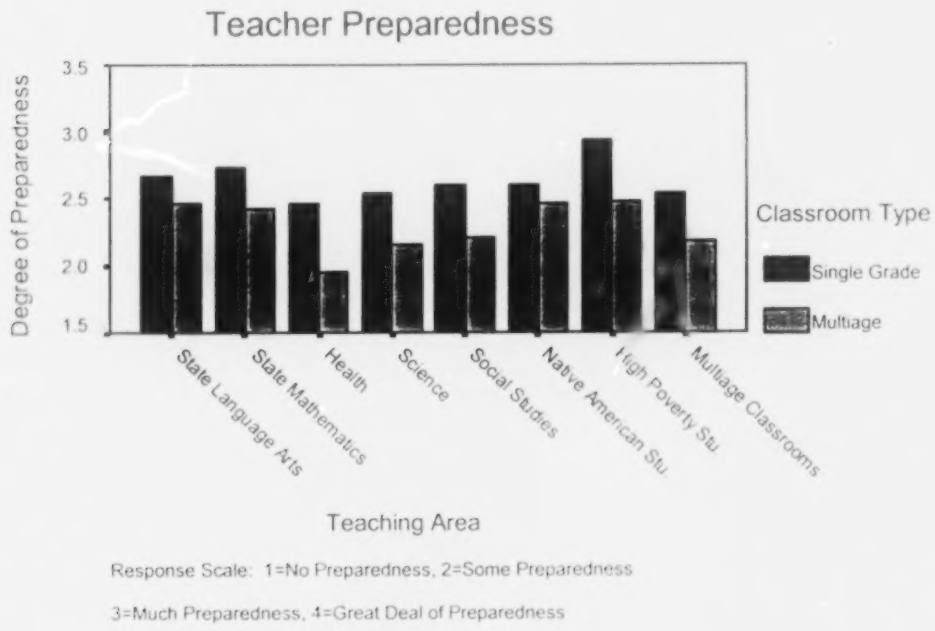

Figure 1. Teacher perceptions of preparedness in content areas.

When asked about feelings of preparedness concerning their knowledge and skills to teach in various areas (Figure 1), the majority of teachers indicated (on a 1–4 scale) only "some preparedness" to teach health (2.04), science (2.22), multiage classrooms (2.20), social studies (2.30), state math standards (2.45), state language arts standards (2.49), Native American students (2.50), and high poverty students (2.59). Single grade teachers reported a slightly higher mean perceived preparedness (2.50) than multiage teachers (2.24), but the difference was not statistically significant.

Classroom Practices

Most of the results that relate to classroom practices are based on teachers' responses to the Instructional Practices Survey. However, the last part of this section describes results from the classroom observations.

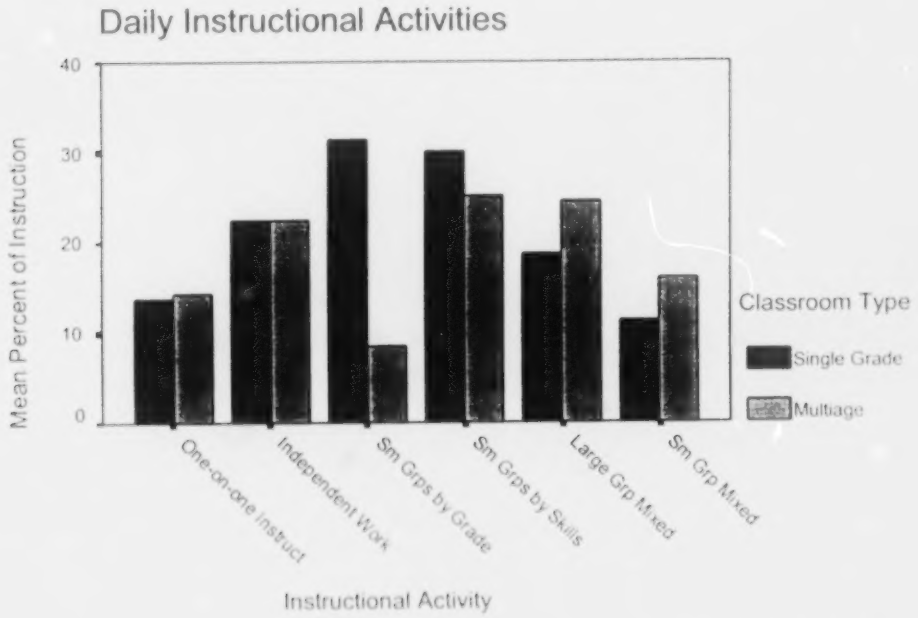

Figure 2. Teacher reports of percent of day in various instructional activities.

Instructional activities. The mean percent of the day spent on various instructional activities (Figure 2) was reported by teachers as follows: one-on-one instruction, 16%; small groups organized by grade level 16%; small groups organized by skills level, 22%; independent work, 22%; and, large group mixed instruction, 29%. It should be noted that there was a large amount of variability among the answers reported by teachers to this question (mean $SD = 15.97$). Compared to multiage teachers, single grade teachers reported more use of small groups organized by grade level and large mixed groups and less use of small groups organized by skills level. However, only the difference in using small groups by grade level was statistically significant ($p < .04$). In the grade level analysis, reported daily percentage of large group mixed instruction was twice as large for grades 6–8 as for grades K–2 and grades 3–5.This difference was statistically significant ($p < .004$).

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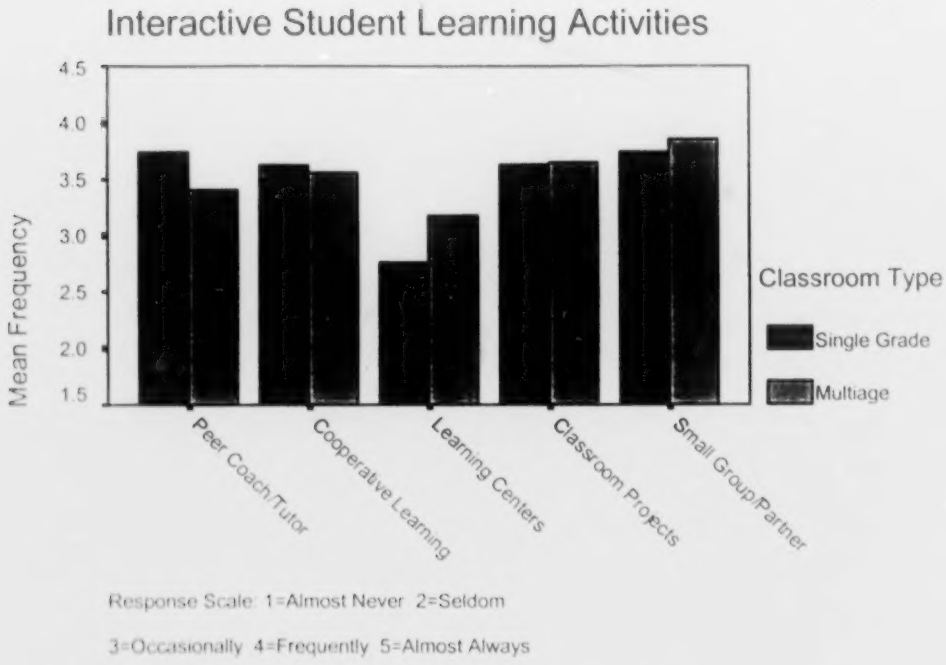

Figure 3. Distribution of interactive student learning activities.

Student interaction. Figure 3 shows that the reported frequency of type of student interaction was highest for small group learning or partners, classroom projects, and cooperative learning, with average frequency ratings (on a 1–5 scale) of 3.84, 3.62, and 3.57 respectively. Single grade teachers reported more use of peer coaches or tutors and less use of learning centers than did multiage teachers, although the differences were not statistically significant. With regard to grade levels, teachers in lower grades reported significantly more use of learning centers than did teachers in higher grades ($p < .02$)

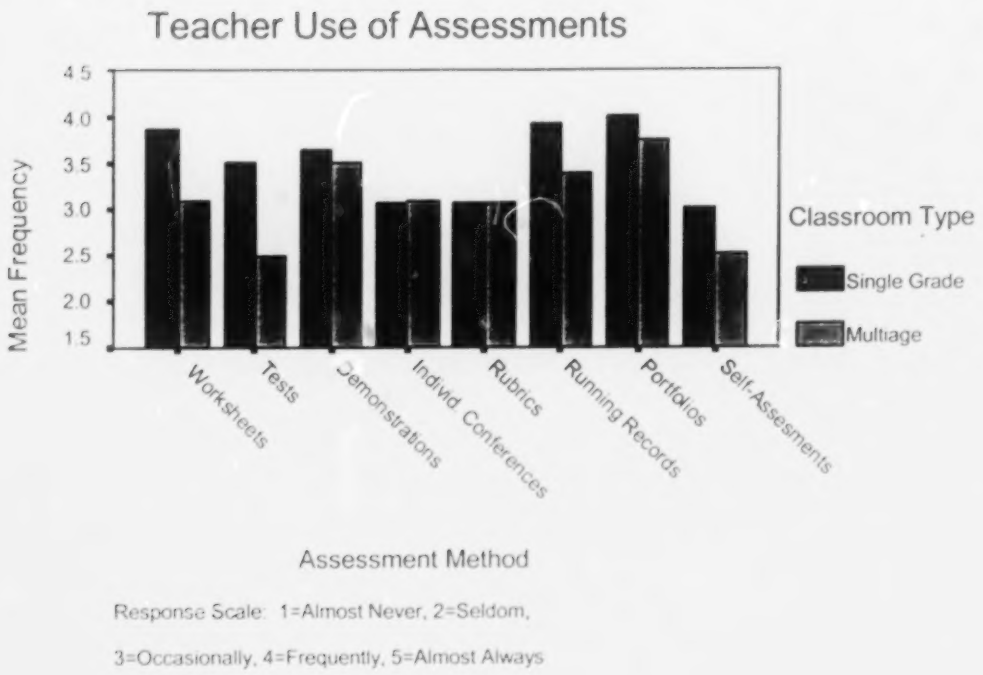

Figure 4. Teacher use of various assessment methods.

Student assessment. The student assessment method shown in Figure 4 with the lowest mean reported frequency of use by all teacher respondents (on a 1–5 scale) was student self-assessment (M = 2.64). Portfolios had the highest reported use (M = 3.81). Single grade teachers reported more frequent use of tests and worksheets compared to multiage teachers, and both differences were statistically significant ($p < .04$). In the grade level analysis, teachers in grades 6–8 reported significantly more frequent use of worksheets and rubrics (both $p < .01$) than did teachers in the lower grades.

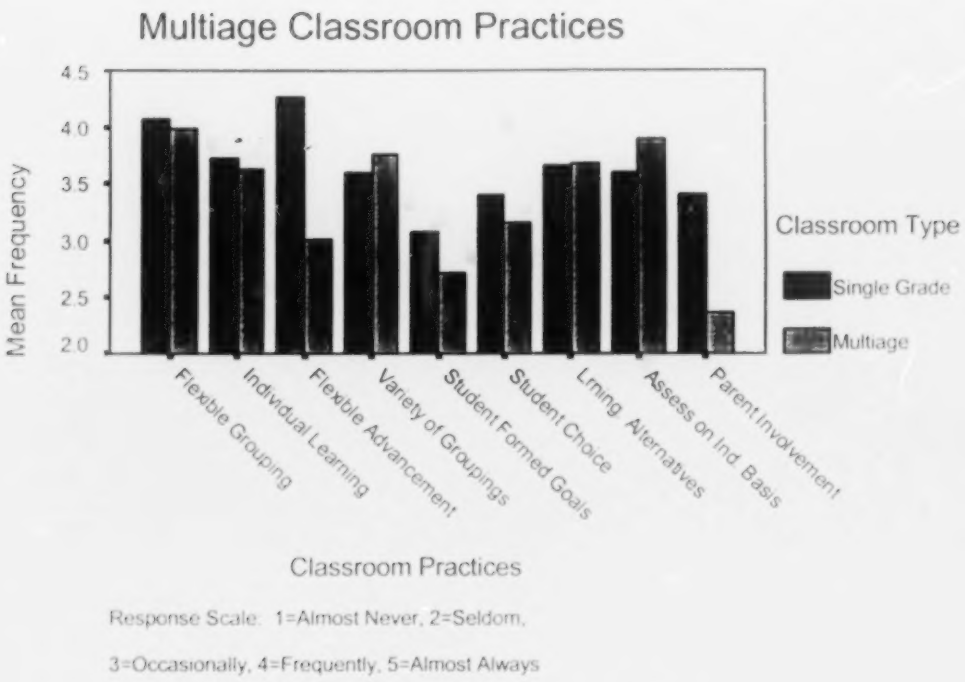

Figure 5. Distribution of classroom practices.

Multiage classroom practices. Figure 5 shows the frequency of selected classroom practices. Means for five of the nine items which asked about the frequency (on a 1–5 scale) of classroom practices associated with multiage classrooms ranged from 3.6 to 4.0, "frequently." These practices included individual learning sequences, multiple learning opportunities, variety of groupings, students assessed on an individual basis, and flexible grouping. Parent involvement, student-formulated goals, student choice, and flexible student advancement were answered as "occasionally" (2.61–3.28). Compared to multiage teachers, single grade teachers reported higher frequencies of flexible advancement and parent involvement, differences which were statistically significant ($p < .001$). Overall, single grade teachers reported higher frequencies of multiage practices ($M = 3.61$) than did multiage teachers ($M = 3.36$), but the difference was not statistically significant.

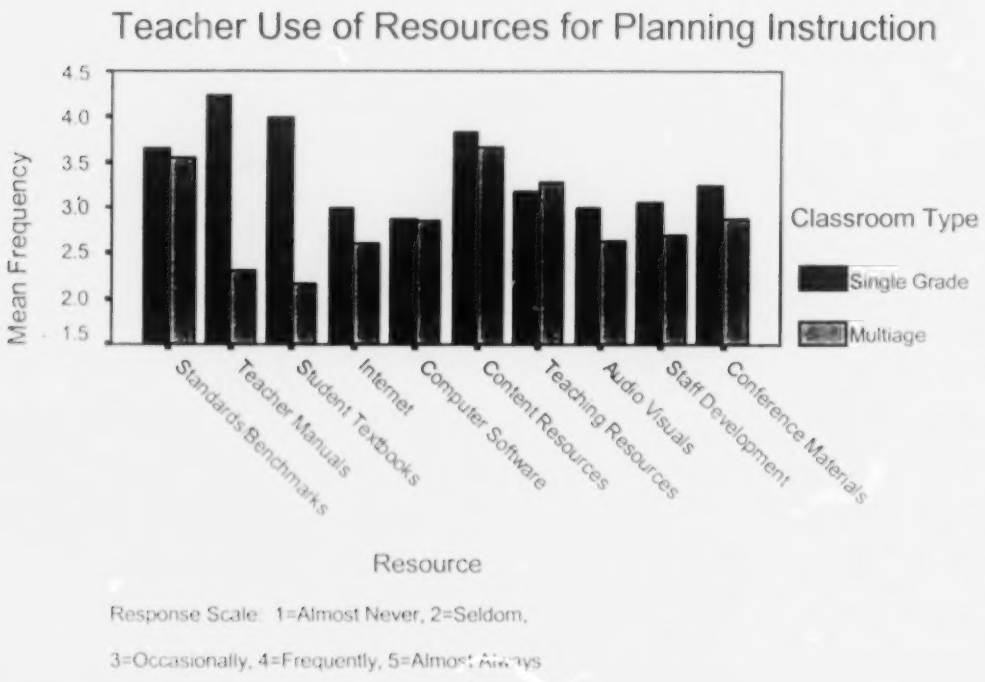

Figure 6. Teacher use of planning resources.

Instructional resources. Figure 6 shows the frequency with which various resources are used to plan instruction. The resources with the highest reported frequency of use (on a 1–5 scale) were standards/benchmarks and content area resources (3.6 and 3.7, both between "occasionally" to "frequently"). Audiovisuals, staff development materials, and computer software were rated lowest in frequency of use (2.71–2.83). The largest differences between the classroom types were the higher reported use of teacher manuals and textbooks by single grade teachers compared to multiage teachers. Both differences were statistically significant ($p < .001$).

Classroom Observation Results

Due to the small sample size of single grade classrooms within grade levels (see Table 2) and because all the single grade classrooms were located at one school, observations are described in detail for the different grade levels, but only general descriptions are given for observations related to the type of classroom. There were 37 classrooms observed. Tables 3 through 7 indicate the percentages of the observations that were recorded in each category for each grade level.

Table 2
Classrooms Observed

Classroom Type	Grade Level			Total
	K–2	3–5	6–8	
Single Grade	3	5	10	18
Multiage	5	8	6	19
Total	8	13	16	37

Analysis of the observation data on teachers' instruction provided in Table 3 showed that the most frequently observed instructional practice in the district was worksheets. There were more observations of worksheets in single grade classrooms than in multiage classrooms.

Table 3
Percent of Observations of Instructional Practices by Grade Level

Instructional Practice	Grade Level		
	K–2	3–5	6–8
Guided Reading	22%		
Discussion	9%	4%	15%
Hands-On	13%	15%	13%
Worksheet	13%	33%	30%
Oral Review	16%	15%	5%
Computer	13%	15%	8%
Miscellaneous[a]	13%	15%	23%
Lecture	3%	4%	8%
Total	100%	100%	100%

[a]Instructional practices observed fewer than four times were listed as miscellaneous, e.g., journaling, story boards, singing, artwork, learning centers.

With regard to student groupings, findings from the observation data shown in Table 4 revealed fewer small groups were being used in single grade classrooms compared to multiage classrooms. While there were clusters of desks in some single grade classrooms which suggested small group work, students at these desks were working independently.

Table 4
Percent of Observations of Student Groupings by Grade Level

Type of Student Group	Grade Level		
	K–2	3–5	6–8
Large	25%	22%	35%
Small	50%	22%	35%
Independent Work	25%	19%	30%
Total	100%	100%	100%

As shown in Table 5, teacher facilitation was the most frequently observed interaction between teachers and students in grades K–2. When facilitating, teachers actively directed assignments and encouraged student-generated questions. When monitoring, teachers were checking student behaviors and student work. Teacher monitoring of students was the most frequently observed interaction between teachers and students in grades 6–8. Discipline-based interactions between teachers and students occurred more with monitoring interactions as well as the use of worksheets.

Table 5
Percent of Observations of Teacher-Student Interactions by Grade Level

Teacher-Student Interaction	Grade Level		
	K–2	3–5	6–8
Facilitation	56%	25%	16%
One-on-one	25%	26%	18%
Monitoring	16%	26%	33%
Total	100%	100%	100%

Table 6 indicates the amount of student interaction in observed classes. The levels of academic interaction were defined by the number of students interacting. Overall, there were low amounts of academic student interactions, particularly in grades K–2. More variability existed among classrooms in social interactions compared to academic interactions. Students in the higher grades socialized much more than did students in lower grades. Students in grades 3–5 interacted more in terms of academic work than did students in grades 6–8.

Table 6
Percent of Observations of Student Interactions

Student Interactions	Grade Level		
	K–2	3–5	6–8
Academic– low[a]		44%	28%
Academic– medium	9%		
Academic– high	22%		13%
Non-Academic Social		7%	30%
None	69%	48%	30%
Total	100%	100%	100%

[a]Out of the total number of students in an observed class and depending on class size, 2–3 students interacting was categorized as low; 4–7 students interacting as medium; and 10 or more students interacting as high.

Observed student participation in academic work is described as actively engaged, working, or passive (Table 7). Actively engaged students exhibited interest and fun when completing academic assignments. Working students were trying to complete assignments quickly so they could play at a nonacademic task. Passive students were idle. More students were observed working (60%) than were actively engaged (25%) in academic assignments, tasks, or activities. Nearly one-fourth of students in grades 6–8 were passive.

Table 7
Observations of Student Participation in Academic Work

Student Participation	Grade Level		
	K–2	3–5	6–8
Actively Engaged	25%	33%	26%
Working	75%	59%	50%
Passive		7%	23%
Total	100%	100%	100%

Overall, observations indicated that multiage classrooms teachers facilitated more than teachers in single grade classrooms. There were more academic-based peer interactions when paired with instructional practices that included learning centers and hands-on learning activities. In general, there appeared to be higher levels of active engagement by students in academic learning when teachers were facilitating rather than monitoring instruction.

Implementation Issues

The information presented in this section relates to teachers' and administrators' perceptions of the results of implementing multiage classrooms in MSD, the challenges that they encountered, and the staff development needs that exist. The data are based on teachers' responses to the Instructional Practices Survey and on interviews with MSD administrators.

Student improvement. The Instructional Practices Survey asked teachers who had one or more years experience in multiage classrooms to rate six items that were based on previously established desirable MSD Student Outcomes on a five-point scale from "no improvement" to "great improvement" since teaching multiage classrooms. There were 42 teachers who answered this question. Their mean rating was 2.65, between "very limited" to "some improvement." Teachers who had practiced looping at MSD (n = 62) rated the same student outcomes with regard to teaching looped classes. The mean rating was 3.06, "some improvement."

Advantages and disadvantages of instructional practices. The most frequently mentioned advantages of multiage classrooms and the percentage of the responses to this question (total responses = 51) were students helping each other (71%), continuity of structure (16%), and student social comfort (14%). The most frequently mentioned disadvantages of multiage classrooms (total responses = 62) were too many differences across grade levels (34%), high preparation time (19%), lack of materials (13%), and not enough classroom staff (11%). The most frequently mentioned advantages of looping (total responses = 33) were knowing students' strengths and weaknesses (64%) and the better quality of teacher-student relationships (36%). The most frequently mentioned disadvantages of looping (total responses = 30) were personality conflicts between teacher and student (43%), students' lack of exposure to other teaching styles (30%), and the need to plan materials for more than one grade level (17%).

Staff development. Of the 21 staff development topics listed on the survey, the mean number of topics that teachers reported attending was 11, and the mean reported value of the activities was 2.5 (between "some" and "much" value.) There were no differences between single grade and multiage teachers. The strongest need for additional professional development (based on 45% or more of teachers indicating "definitely needed") were in the areas of teaching multiage classrooms (62%), adapting curriculum in multiage classrooms (58%), writing instruction (52%), student motivation techniques (55%), computer skills training (54%), technology in the classroom (51%), reading instruction (49%), and Native American language/culture (49%).

Improvement of teaching and learning. There were 98 total responses to suggestions for improving instruction and student learning in MSD. The most frequently mentioned suggestions and the percentages of total responses were as follows: more staff training and development for multiage and looping (28%); more materials including the use of textbooks (19%); restructuring the multiage approach so that kindergarten is a single grade and there are two (and not three) grades in multiage classrooms (15%); more preparation and planning time (12%); more attention to special education/pullout staffing (9%); and, teacher choice about multiage and/or looping (8%).

Administrator perspectives. Six principals and three district administrators were interviewed. To protect anonymity, all respondents are referred to as "administrators."

Administrators reported that the division among multiage and single grade teachers runs deep in the district. For the past three years, administrators have experienced pressure from veteran teachers (those who have taught longer in MSD) to support single grade classrooms and to discontinue the multiage approach. Teachers in one school convinced the administration to permit them to return to single grade classrooms. Only one school out of the four in the district has had no friction among teachers and administration over the multiage issue and that is because at this rural country school, multiage classrooms have been the norm. Administrators indicated that the number of teachers involved in team teaching has decreased in some schools because of the multiage division among teachers and unresolved personal conflicts. Most principals give teachers the choice of whether to team teach and support their efforts for incorporating team teaching into their classrooms.

According to the administrators, a major barrier to the multiage approach was the lack of effort on the part of many teachers to change instructional practices. Several reported that the lack of sufficient training and the abrupt manner used to mandate multiage classrooms and to discontinue the use of textbooks in the classrooms are the roots of teacher resistance. A common concern among administrators was that the three-grade span in multiage classrooms was too great for even the most experienced and willing multiage teachers.

Administrators reported that the schools and teachers were at many different stages and levels of multiage implementation and had varied needs depending on the situations in their schools and classrooms. They identified the following as struggles for teachers:

- Three-grade span in multiage classrooms
- Lack of curriculum resources
- Lack of sufficient planning time
- Discipline issues affecting classroom teaching
- High number of special needs students and diverse student situations
- Lack of collegiality among teachers
- Low morale of teachers
- Lack of common curriculum resources

Administrators identified the following as district needs:

- In-depth training for effective teaching practices
- Sufficient planning time for teachers and administrators
- Follow-up and continuity in teacher training programs
- Sufficient resources for classrooms and teachers
- Additional resources and training to offset the high number of students with emotional needs
- Training for administrators to improve teacher evaluation

Although administrators were being pressured by teachers on both sides of the debate, they generally supported the multiage approach because they had seen its potential in several classrooms.

With sufficient training and teacher effort, these administrators felt that a multiage program could be successful. However, they noted that the current number of multiage classrooms where teachers understood multiage practices and were teaching effectively was small. Thematic units were mentioned as exemplary of good teaching and learning practices in these classrooms.

Comparison School Results

The purpose of including the comparison school in this report was to examine responses to the Instructional Practices Survey by teachers in a multiage program that was experiencing success in a different school district. Although the primary goal was description of the resulting data, some statistical comparisons using MANOVAs were made between the sample of teachers at the comparison school who were all in multiage classes and team teaching ($n = 7$), and the sample of teachers at MSD who were in multiage classes and team teaching ($n = 28$). The following sections describe the main findings.

Classroom and teacher characteristics. The comparison teachers' multiage classes each covered a span of two grade levels, and all the teachers looped or were planning to loop so that students would stay with the same teacher and classmates for two years. The MSD multiage team teachers' classes each covered a span of three grade levels, and 61% of the teachers were looping. The comparison teachers reported having significantly more weekly instructional planning time during regular school hours than did the MSD multiage team teachers ($M = 2.68$, $SD = 1.77$, $p < .03$).

When asked about preparedness to teach in various areas, the majority of comparison teachers indicated (on a 1 – 4 scale) "much preparedness" or a "great deal of preparedness" to teach all areas asked by the question. The comparison teachers' rated their preparedness to teach significantly higher than the MSD multiage team teachers in all the content areas (all $p \leq .03$) and in multiage classrooms ($p < .01$). The comparison teachers' overall mean perceived preparedness was 3.31 ($SD = .55$), "much preparedness" which was statistically higher than the MSD multiage team teachers' mean of 2.19 ($SD = .57$), "some preparedness" ($p < .04$).

Classroom practices. The reported mean frequencies for the comparison teachers were high for all the types of student interaction listed in the survey which included peer coaches or tutors, cooperative learning, learning centers, classroom projects, and small group learning or partners. The mean rating (on a 1–5 scale) was 3.97 or "frequently," and was significantly higher than that of MSD multiage team teachers for which the mean rating was 3.52, between "occasionally" and "frequently" ($p < .01$). The comparison teachers reported significantly less use of worksheets and running records than the MSD multiage team teachers (both $p < .03$). The comparison teachers' overall mean frequency of multiage classroom practices was 4.00 ($SD = .39$) or "frequently" which was significantly higher the MSD multiage team teachers' mean of 3.36 or "occasionally" ($SD = .72$, $p < .04$). For planning instruction, comparison teachers reported that their most frequently used resource (on a 1–5 scale) was standards/benchmarks, which was unanimously reported as "almost always" used ($M = 5.00$). The comparison teachers reported significantly more use of this resource than the MSD multiage team teachers ($p < .003$) and also more use of computer software ($p < .03$).

Implementation issues. The comparison teachers' mean rating of student outcomes (on a 1–5 scale) since teaching multiage classrooms was 3.55 ($SD = .49$), between "some improvement"

to "much improvement." This was significantly higher than the MSD multiage team teachers' mean of 2.57, (SD = 1.11) between "very limited improvement" to "some improvement" ($p < .01$). Data are not reported for student outcomes with regard to teaching looped classes because only two comparison teachers had been practicing looping for more than a year.

Of the 21 staff development topics listed on the survey, the mean number of topics that comparison teachers reported attending was 14.57, and the mean reported value of the activities was 3.06 (SD = 2.51), "much value." While the two groups of teachers did not differ significantly in the average number of professional development activities, the comparison teachers rated the overall value of their professional development significantly higher than did the MSD multiage team teachers ($p < .02$). The MSD teachers' reported mean value was 2.51 (SD = .53) between "some value" to "much value."

Prior to administering the Instructional Practices Survey to the comparison school teachers, the author conducted an informal interview with the school's principal. In 1991 and 1992, the principal held voluntary study sessions on multiage classrooms, and in 1993, a group of teachers at the school decided to try the approach. In the same year, the school began early student release on Wednesdays to provide time for staff development. The principal said there was an increase in student social skills and in student test scores associated with multiage classrooms which inspired the single grade teachers to improve as well. Yearly parent surveys indicate 95% satisfaction, and the multiage program has a waiting list.

The principal stressed the importance of professional development for all teachers at the school, commenting that staying the same is not an option for any of the teachers. Recently, the school started teacher-driven study groups which meet bimonthly during release time. Teacher collaboration occurs through team and whole school planning on the afternoons not devoted to study groups.

All teachers in the school are implementing literacy blocks. The school has worked at integrating curriculum, instruction, and assessment with content standards. Because the multiage teachers teach a two-year grade span and loop with their students, the curriculum is adjusted to fit into the two-year time span. The teachers initially tried a multiage span of three grades but found it too difficult to manage.

Summary of Results

This section provides a summary of the main findings integrated across the different sources of data. In accordance with the purposes of the study, the findings identify classroom practices that are occurring in MSD and provide information on issues related to implementation of multiage classrooms.

- The majority of MSD teachers have two hours or less for individual and collaborative planning during regular school hours. This is less time for planning during school than reported by MSD single grade teachers and the comparison school multiage teachers.
- Both single grade and multiage teachers MSD teachers rated themselves as

somewhat prepared to teach the various content areas. The comparison multiage teachers rated their overall preparedness fairly high.

- Teachers of single grade classrooms and teachers of students in grades 6–8 reported using more large mixed groups in their daily instruction compared to MSD teachers of multiage classes and MSD teachers of students in grades K–5.

- MSD teachers reported that all the types of interactions among students addressed by the survey occurred at least occasionally. However, classroom observations indicated low amounts of academic student interactions in observed classes, particularly in grades K–2. MSD multiage team teachers reported lower frequencies of student interaction than the comparison school multiage teachers.

- MSD teachers reported that their most frequently used student assessment method is portfolios; their least frequent method is student self-assessment. Single grade teachers reported more use of worksheets and tests than did teachers of multiage classrooms. According to classroom observations, worksheets was the most frequently observed instruction/assessment in the district. MSD multiage team teachers reported more use of worksheets and running records than the multiage teachers in the comparison school.

- MSD single grade teachers reported higher frequencies of multiage classroom practices than MSD multiage teachers (primarily for flexible student advancement and parent involvement). The comparison school multiage teachers reported higher frequencies than MSD multiage team teachers for flexible student advancement, opportunities for group work, and multiple learning opportunities. MSD multiage team teachers used the various classroom practices less than the comparison multiage teachers.

- MSD teachers' most frequently used resources for planning instruction were content area resources and standards/benchmarks. The comparison school multiage teachers reported almost always using standards/benchmarks and frequently using content area resources.

- MSD multiage teachers reported limited improvements in student outcomes. The comparison school multiage teachers rated these same outcomes much higher for their students.

- The amount of staff development reported by teachers did not differ among groups. However, teachers in the comparison school rated their staff development activities as more valuable than did other teachers.

- MSD teachers were observed using instructional practices that involved monitoring of student work more than facilitating of student work, except in grades K–2 where the findings were reversed. Overall, MSD multiage teachers did more facilitating than single grade teachers.

- Classroom observations indicated that more MSD students were simply working than were actively engaged in their academic work. Almost one-fourth of students observed in grades 6–8 were passive with regard to their academic work.

- MSD administrators and teachers agreed on the need for more teacher planning time. Administrators identified morale and trust as issues among MSD teachers. They cited teacher dissatisfaction with the manner in which the multiage approach was implemented in the district.

- The principal of the comparison school reported that the school's multiage classrooms have been associated with improved student achievement and with parent satisfaction. Key differences between MSD multiage team teachers and comparison multiage teachers were that the comparison teachers had more years of multiage teaching experience, more access to planing time during school, greater perceptions of preparedness to teach content areas, higher frequencies of student interaction in their classrooms, more frequent use of standards/benchmarks to plan instruction, and a higher use of multiage classroom practices.

DISCUSSION

This section presents a discussion of the implications of the study findings for implementing multiage programs and for the use of nongraded classrooms as a school reform strategy.

Generalizability of Results

The findings from the study of instructional practices in MSD and the comparison school have several implications for successful implementation of multiage programs. However, first there should be a discussion about whether the results are generalizable. Prior teaching experience had an influence on the results that were obtained from the Instructional Practices Survey. The MSD single grade teachers had more teaching experience and had been in the district longer than MSD multiage teachers. (When MSD hired new teachers, often it was with the expectation that they would teach a multiage classroom.) Similarly, the comparison school multiage teachers had more teaching experience than the MSD multiage team teachers. Thus, the comparisons that were made in the study do not allow an evaluation of the effectiveness of classroom type (single grade or multiage). However, the descriptive results, in comparison with what previous research has shown about multiage classrooms, have implications for implementation.

Another factor that affects generalizability concerns the amount of time that the multiage program has existed in MSD. The program was in its third year of implementation when the study was conducted. Due to the many changes in instruction that are needed when teachers switch from traditional classrooms to multiage, two years may not be enough time for successful implementation to occur (Surbeck, 1992).

Finally, it is difficult to separate the effects of multiage classrooms from effects that occur when teachers, schools, and districts adopt the philosophy about learning and development that a multiage approach embraces. As described in the introduction to this report, Lloyd (1999) reminded researchers that instruction is the key to improved student learning and not the multiage structure *per se*.

Implications for Implementing Multiage Programs

With the above cautions in mind regarding the interpretation of results, what do the current findings tell educators and researchers about implementing multiage classrooms, and how do these findings relate to previous research? Results of this study are related to five implementation issues: (1) collaborative planning, (2) understanding the complex changes required, (3) support from principals (4) adequate resources, and (5) teacher collaboration.

Collaborative planning. In response to the open-ended questions on the Instructional Practices Survey, MSD teachers expressed their dissatisfaction with the way that multiage classrooms were mandated by district administrators. MSD administrators had taken this stance as a way to effect immediate and drastic changes in the district in response to the urgent learning needs of students. However, it created dissatisfaction among teachers who then became informal members of "pro" and "con" camps, as district administrators described in interviews. Other research suggests that planning and obtaining buy-in from stakeholders are critical to implementing multiage programs.

After studying multiage classrooms in Oregon in the early 1990s, Miller (1996) stated that "too many educators are implementing multiage classrooms and schools with insufficient forethought, planning, and participation of key stakeholders. I can think of no better way to destroy a potentially sound educational practice" (p. 12). Miller also described an urban district in the Midwest where teachers were having difficulty implementing multiage classrooms successfully as evidenced by student test scores. Similar to MSD, the change to multiage had been mandated with little teacher involvement in the decision and insufficient teacher preparation.

Miller (1996) urged that districts or schools that are considering changing to multiage classrooms devote considerable time to planning and preparation. Surbeck (1992) suggested that at least two years be devoted to this process. The planning process must address changes that will be needed in structure such as scheduling and changes in instruction such as student groupings. However, first the culture and climate of the school with regard to nongradedness must be addressed. This means that all stakeholders need to be on board if the change to multiage is to be successful. The stakeholders include district administrators, principals, teachers, and parents (Miller, 1996). Of this group, probably the most important are the principals and the teachers. They are the ones who must communicate to parents the benefits of a multiage approach for their children. But for most principals and teachers, accepting the philosophy that underlies multiage practices means unlearning previously held notions about how children learn (Miller, 1994), and for this to occur, new skills and knowledge must be acquired (Gaustad, 1995). As a teacher in Kentucky's mandated K–3 multiage primary program commented, "from the very beginning, teachers who did not want to teach using the philosophy upon which the primary program was based found ways to circumvent teaching in a multiage classroom" (McGee, 2000, p. 69).

Understanding the complex changes required. Underlying the need for adequate planning and preparation is the complexity of the changes that are required of educators who are adopting multiage approaches to instruction. In Gaustad's (1995) study of multiage implementation, the author remarked that "perfunctory planning that ignores the magnitude and complexity of the change can produce disastrous results" (p. 8). Of course, all changes in education require careful consideration and time, but the degree of change required of teachers in multiage classrooms is considerable. Osin and Lesgold (1996) suggested that this high degree of change is the reason that more clear cut results favoring student learning in multiage programs have not been obtained. "We claim that the main reason for the low rate of success is that the teachers on whose shoulders (and heads) success is based, were assigned a mission impossible" (p. 639). The authors referred to the review by Gutierrez and Slavin (1992) which found that results clearly favoring mixed-age instruction were found mainly for those instances which involved less complex changes, such as multiage instruction in one subject. The authors concluded by proposing the use of modern information systems and computer software to redesign traditional education approaches so that the change to multiage classrooms will be easier to manage and less complex.

Miller (1996) reminded districts that "teachers can be overwhelmed by a plethora of changes mandated by administrators who are unmindful of the impact that such reform efforts have on classroom teachers" (p. 13). Miller emphasized that because changing to multiage instruction requires a "significant shift in classroom norms, major attention needs to focus on supporting the emotional as well as the cognitive changes occurring to those engaged in the innovation" (p. 15). Multiage teachers interviewed by ERS Spectrum (1995) stated that an unexpected result of changing

to multiage instruction was that teachers lost their feelings of competence. Teachers were afraid that they were not doing things right in their classrooms. Miller (1994) found that even veteran teachers experienced these feelings, sometime more so than newer teachers. MSD teachers expressed similar fears through their request for more training and staff development, which was the most frequently mentioned suggestion for improving instruction in the district. MSD administrators also referred to teachers' needs for in-depth training on effective teaching practices.

Support from principals. The needs of teachers is one reason why strong support from principals is important when districts and schools change to multiage classrooms. In a study of four Northwest elementary schools that were successfully implementing multiage education, Miller (1996) described the principals' role in transforming the school environment so that it was open to change and growth. Specifically, the principals helped create learning communities that empowered teachers to question traditional instructional practices and assumptions about learning. Principals were willing to support teachers, for example, by finding resources for them and helping them prepare materials. Miller also noted that principals respected teachers' developmental differences in learning new multiage instructional practices. Mandating the multiage approach in MSD may have made the formation of learning communities in the district more difficult.

Gaustad (1995) stressed that principals of multiage schools must create a sense of community around the change to multiage instructional practices. Gaustad warned about the formation of subgroups who are for or against the approach. As mentioned previously, the change to multiage classrooms divided teachers in MSD.

Adequate resources. MSD teachers expressed a need for more materials and resources for their multiage classrooms. As the Instructional Practices Survey indicated, MSD teachers in multiage classrooms did not tend to use textbooks or grade-level materials because of district policy. In general, the use of textbooks is a controversial issue when implementing multiage classrooms (Wall, 1994). MSD district administrators felt that using traditional textbooks would reinforce the tendency to teach to separate grade levels in multiage classrooms. However, few classroom materials are available specifically for multiage programs. Generally, authentic learning experiences and thematic materials need to be substituted for standardized materials and traditional textbooks (Surbeck, 1992). However, developing new materials and thematic units that can be used for different developmental levels takes time.

Multiage MSD teachers indicated that they have less planning time during school hours than single grade MSD teachers and the comparison school multiage teachers. The teachers interviewed by ERS Spectrum (1995) stressed that multiage classrooms require extra planning time compared to traditional classrooms. Gaustad (1995) suggested that more staff, such as paraprofessionals, may need to be hired for multiage programs to increase teachers' opportunities to prepare instruction.

Professional development is a critical resource for implementing a multiage program. MSD teachers' relatively low self-ratings of preparedness to teach the content areas and in multiage classrooms are indicative of their needs for additional training. The relatively low value that MSD teachers attached to previous staff development activities suggest the need for changes in content and delivery. As described in the introduction, teachers in multiage classrooms need to learn many new skills that are not required in single grade classrooms. The use of developmentally appropriate

practices by multiage teachers requires that they understand child development and have the skills to use education strategies that support children' various learning styles (Surbeck, 1992). They also need opportunities to observe other teachers who are successful at using these skills and to try them out in their own classrooms, followed by feedback (Gaustad, 1995). MSD started such training by having their multiage teachers observe the comparison school teachers.

Teacher collaboration. Several researchers have stressed the need for collaboration among teachers of multiage classrooms (e.g., Surbeck, 1992, Gaustad, 1995). Teachers themselves have indicated that teaming is essential to successful multiage instruction (ERS Spectrum, 1995). Yet most teachers are not accustomed to collaborating, and single grade classrooms encourage teacher isolation. MSD administrators commented that trust among teachers is an issue in the district, yet little planning time is devoted to collaboration. According to Gaustad (1995), the principal of the multiage school must help create conditions that foster a sense of community among teachers and facilitate cooperation and positive interactions among members of teaching teams. Staff development on team building also can increase teachers' collaborative skills (Lauer, Wilkerson, Goodwin, & Apthorp, in press).

Nongradedness as a Reform Strategy

MSD administrators mandated the change to multiage classrooms because of the potential for this approach to reform instruction in the district. Almost all MSD students are from an ethnic minority group and low socioeconomic background. As discussed in the introduction, instruction in multiage classrooms is designed to meet the individual developmental needs of students and also their learning styles which often are associated with cultural backgrounds. In this regard, multiage programs are aligned with the Learner-Centered Psychological Principles developed by the American Psychological Association and McREL (1993). The principles are based on the essential finding from research and practice that students learn best in an environment whose primary focus is the learner and the learning process.

A multiage approach involves community and collaboration among both students and teachers. Within each MSD school, teachers and students are organized into families based on grade levels. The district designed this organization to support teaming among teachers. The family concept also was a way to create *tiyospaye*– an Indian word for family or community– within the schools because many MSD students' own families are unstable.

Thus, MSD's reasons for restructuring classrooms into a multiage format were based on practices which research has shown to be psychologically and educationally effective. However, as a reform strategy, the switch to multiage classrooms requires complex changes, particularly of its teachers, in both philosophy and practice. These changes need extensive support and time to be effective, perhaps even as much as six years before changes in student learning can be documented by achievement tests (Surbeck, 1992). Thus, as a reform strategy, nongradedness is not a quick fix for low student achievement.

Lessons from Kentucky. In 1992, the Kentucky Education Reform Act mandated the formation of K–3 multiage classes as one component of a new primary program for Kentucky school districts. In 1997, Guskey and Lindle reported on the effects of Kentucky's multiage classrooms. The

authors stated that "since its mandated implementation in 1992, the multi-age/multi-grade attribute has remained the most controversial and most difficult for teachers. It is also the attribute teachers rate as least important and the one the fewest teachers would continue if given the choice" (p. 2). In discussing the reasons for this result, the authors cited three problems based on an earlier report (Koretz, Barron, Mitchell, & Steecher, 1996): (1) developmental differences among students are magnified in multiage classrooms which intensifies teachers' challenges to instruct effectively; (2) multiage grouping overwhelms teacher's repertoire of instructional strategies and does not inspire them to create new ones; and, (3) multiage grouping causes teachers to become more concerned with classroom management rather than with the quality of students' learning.

Guskey and Lindle (1997) also expressed their concern that since the implementation of Kentucky's primary program there has been an increase in the number of fourth-grade students who were classified as "exceptional." This classification means that the students have learning difficulties and need special services. The authors stated that the increase in fourth-grade "exceptional" students is counter to the expectation that multiage primary teachers would be better able to identify individual learning problems and to help students develop strong skills before they reach fourth grade.

Instruction is key. The examples from Kentucky and now MSD indicate that in today's era of education accountability, nongraded strategies alone are unlikely to produce the kinds of quick improvements in student performance that school officials are looking for. However, it is clear that multiage approaches are developmentally sound and are aligned with the research on children's learning. The key appears to be the quality of instruction that is occurring within multiage classrooms.

Guskey and Lindle (1997) summarized this viewpoint [also discussed by Gaustad (1995) and Lloyd (1999)]:

> *It is not how you group students for instruction, but what you do within those groups that is important to learning* [italics in original]. Multi-grade classes do not guarantee high quality instruction for all students, and single grade classes do not prevent it. While some grouping practices are more conducive than others to the use of certain instructional activities, it requires preparation and professional judgment to know what strategies fit which grouping practices. The imposition of structural changes can have deleterious effects on teacher self-efficacy and confidence and thus affect student performance. Improvements in student learning are far more likely to result from efforts that help teachers provide better and higher quality instruction than from mere structural changes. (p. 10)

The quality of instruction can help explain why MSD has yet to see positive effects on student performance due to multiage classrooms[2]. According to the findings of the MSD/McREL

[2]In analyses of MSD student achievement in language arts and mathematics from the year prior to the study, there were no statistically significant positive effects associated with multiage classrooms.

design team study, MSD teachers feel inadequately prepared to teach content areas, have few instructional resources, have insufficient planning time, and are struggling to collaborate among themselves. Teachers' reported frequencies of multiage practices in MSD multiage classrooms is relatively low. Classroom observations indicate that across the district teachers are relying on worksheets and monitoring rather than facilitating student learning. In short, the study indicates that present multiage classrooms in MSD have not yet resulted in the high quality instruction that is needed in nongraded programs, as described by Anderson and Pavan (1993).

During the academic year following the completion of this study, MSD administrators made changes which have the potential to positively impact student learning and to raise student achievement scores. The superintendent allowed teachers to choose for themselves whether to teach in single grade or multiage classrooms. The district began to focus on content standards and the alignment of these with instruction and assessment. Teachers were given content-based classroom materials with which to work and more planning time. Principals were given professional development and guidance on how to be instructional leaders. Professional development for teachers emphasized the teaching of literacy. The district implemented a pilot literacy block, with the help of teachers from the comparison school and McREL technical assistance. The district has sent the message to its administrators and teachers that quality instruction is key.

Conclusions

The following conclusions integrate prior research with the results of the current study:

- Multiage programs can be educationally and psychologically beneficial to students when they are combined with high quality instruction.
- Multiage approaches require extensive changes in the philosophies and practices of most teachers and administrators.
- Effective implementation of multiage programs requires (1) extensive planning and preparation that includes stakeholder input; (2) district understanding and support to help teachers make complex instructional changes; (3) support from administrators for the creation of learning communities, (4) adequate resources including classroom materials, planning time, and staff development; and, (5) teacher collaboration that is facilitated by principals.
- Nongradedness is not a quick fix for low student achievement.

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Appendix A

Classroom Observation

Name of School _____ Name of District _____

Person Conducting Observation _____ Classroom Grade _____

Beginning Time of Observation _____ Ending Time of Observation _____

General:

1. How many students are in the class? What subject is being taught?

2. What seems to be the specific objective of the lesson(s)? What is it that students are being expected to learn or do?

3. Describe what is on the walls of the classroom

General (Continued)

4 Estimate the number of classroom library (resource materials) books available to children. Describe the collection.

5 What technology is available in the classroom (computers, listening posts, VCRs, televisions, etc.)? Describe any evidence that suggests how the technology is generally used?

Providing Opportunities for All Children to Achieve: *We want to find evidence that the school is relentless about ensuring that each and every child will achieve high standards of academic achievement. "Every child" includes children receiving special education and bilingual education services, children who have exhibited behavior problems, and other children who tend to fall behind academically. We are looking for evidence that the school is organized in ways that reflect high academic expectations for every student.*

1 Are all children seeming to understand what is being taught? If students are working independently or in groups, are all students or are all groups successfully demonstrating the desired knowledge or skill? Describe in detail

2 If there are children or groups of children having difficulty, what kinds of assistance does the teacher provide? Does the teacher seem to know that these students are having difficulty? How does the teacher respond?

3 How do students interact with each other during the lesson? Do students provide assistance to each other? If so, how?

4 Describe the extent to which students are engaged in the lesson? Are students passively listening, are they actively working, or are they off-task?

Providing Opportunities for All Children to Achieve (continued)

5. If children misbehave, how does the teacher handle the situation?

6. Describe any special support that is offered to children who are not yet proficient in English, who might have a disability, or who otherwise might need special assistance

Partnerships with Parents/Families/Communities: *We want to find evidence that the school is working actively to build strong relationships with families and community groups. We want to find evidence that the school is reaching* **out** *to parents and community in ways that help create a sense of true ' partnership that is built on mutual respect and focused toward the common goal of improving student achievement. We want to find evidence that parents feel that they truly belong at the school and they multiple avenues for getting involved.*

1. Are any volunteers working in the classroom? If so, what are they doing?

2 Describe how the teacher interacts with the volunteer(s)? Describe how the volunteer(s) interact with students

3 If any parents come to visit the class during the observation, describe what happens How are the parents received? How does the teacher interact with the parents?

4 Is there anything in the classroom that gives an indication that parents visit the classroom or volunteer (e g , a special place for volunteers or visitors, pictures of volunteers)?

Curriculum and Instruction: *We want to find evidence that curricula and instruction focus on high academic standards. We want to find evidence that teachers' pursue a variety of instructional strategies to help ensure that their students learn challenging skills. We want to find evidence that all students, regardless of how they are grouped for instruction, have access to challenging academic curricula.*

1 During the lesson, list the most challenging questions or tasks to which students are expected to respond

2 If students are grouped and are being taught different objectives, describe what each group is being taught, participation level, and how they are interacting

3 Describe the instructional strategies the teacher uses during the lesson What does the teacher do to get students to learn the content or skills?

Appendix B

Madison School District
Design Team Study of Instructional Practices
December 1999

Dear MSD Teacher:

The attached survey is part of the MSD Design Team's Instructional Practices Study. The purposes of the study are:

- to identify the instructional practices that are being used in MSD
- to obtain feedback from MSD staff on the effectiveness of these instructional practices
- to relate current instructional practices to student learning outcomes
- to obtain input on needed staff development
- to provide recommendations regarding district improvement plans

The Instructional Practices Study will not be used in any way to evaluate personnel. Instead, the data will be used to inform only the five purposes stated above. The Design Team recognizes the sensitive nature of the data that are being collected and pledges to protect the confidentiality of all respondents. With regard to the Teacher Survey, it is necessary to connect teachers to their students. Therefore, each survey has been assigned an ID code which is stamped on the survey and on this cover sheet. Please sign the bottom of this sheet and give it to the survey administrator from McREL. The master list of teacher names and ID codes will be kept in a secure file at McREL and will not be shared with any other persons. The original completed surveys will be seen only by McREL data analysts. (It should be noted also that although demographic information is being collected on the Teacher Survey, reporting of results will be designed to avoid possible identification of respondents.) The survey will take approximately one hour to complete.

Thank you for your participation in this important study which will give MSD teachers a voice in their district's future. (We hope to have the results available to share with teachers in February.)

Identification Code _____

I agree to participate in the Teacher Survey of the MSD Instructional Practices Study. I have been informed about the purposes of the study and that the confidentiality of my responses will be protected. I understand that completing the survey will take approximately one hour.

Name (Print) _____

Name (Signature) _____

Date _____

MSD/McREL Design Team Instructional Practices Study -Teacher Survey
December 1999

Instructions: Please read each question carefully. Answer all the questions and be complete in your answers. If you need additional room to write, use the back of page 9 and indicate the number of the question that you are answering. When you have finished your survey, please give it to the survey administrator from McREL. Thank you.

1. Which of the following best describes your current classroom structure? *Check one answer.*

____(1) One teacher, one grade level
____(2) One teacher, two grade levels
____ (3) One teacher, three grade levels
____ (4) Team teaching, one grade level
____ (5) Team teaching, two grade levels
____ (6) Team teaching, three grade levels
____ (7) Other *(Please describe.)*

2. Are you looping with the students you currently teach? *Check one answer.*

____ (1) No
____ (2) Yes, I will have the same students for two years.
____ (3) Yes, I will have the same students for three years.

3. *Write a number in each space* to indicate how many students you currently are teaching--

____ (1) for the first time
____ (2) for the second time
____ (3) for the third time

4. Which of the following best describes how you share teaching responsibilities with another teacher (s)? *Check one answer.*

____ (1) There is no sharing of teaching responsibilities.
____ (2) Two or more teachers teach different categories of subjects.
____ (3) Two or three teachers teach all subjects.
____ (4) All teachers teach all subjects.
____ (5) Other *(Please describe.)*

5. How many *hours per week* do you have for instructional planning time during regular school hours? _____

6. *Of the above*, how many *hours per week* do you collaborate with other teachers in planning instruction? _____

7. How many *hours per week* do you use for instructional planning time *outside of regular school hours*? ____

8. *Of the above*, how many *hours per week* do you collaborate with other teachers in planning instruction? ____

9. To what degree does your MSD "family" participate in the following activities *each week*? *Make one check for each activity.*	Almost Never	Seldom	Occasionally	Frequently	Almost Always
Planning of instruction					
Planning of student assessments					
Curriculum planning					
Sharing of information about students					
Sharing of information about teaching strategies					
Other (Please name and rate the frequency.)					

10. Out of the *instructional day*, what *percent* (on the average) do you instruct students in the following ways? *(Note-- your answers do not need to add to100%.)*

____ % (1) One-on-one instruction
____ % (2) Independent work
____ % (3) Small group instruction organized by grade level
____ % (4) Small group instruction organized by skills level
____ % (5) Large group mixed instruction
____ % (6) Small group mixed instruction
____ % (7) Other (*Please describe.*)

11. On the average, what percent of *each day* do students in your classroom interact with each other in learning activities related to instruction? *(Check one answer.)*

____ (1) 0-20%
____ (2) 21-40%
____ (3) 41-60%
____ (4) 61-80%
____ (5) 81-100%

12. When the students you teach interact with each other, how often are they participating in the following learning activities? *(Make one check for each activity)*	Almost Never	Seldom	Occasionally	Frequently	Almost Always
Peer coaching or tutoring					
Cooperative learning					
Learning centers					
Classroom projects					
Small group learning or partners					
Other *(Please name and rate the frequency.)*					

13. How often do you use the following methods of student assessment? *(Make one check for each method.)*	Almost Never	Seldom	Occasionally	Frequently	Almost Always
worksheets					
tests					
demonstrations					
one-on-one conferencing					
rubrics					
running records					
portfolios					
student self-assessment					
other *(Please name and rate the frequency.)*					

14. How often is the following true of your instruction? *(Make one check for each statement.)*	Almost Never	Seldom	Occasionally	Frequently	Almost Always
Grouping and subgrouping of students are flexible.					
Sequences of learning are determined for individual students.					
Advancement, retention, and promotion procedures for students are flexible.					
There are opportunities for students to work with many groups of different sizes and that are formed for different purposes.					
Students formulate their own learning goals with guidance from their teachers.					
Students participate in their own learning through numerous opportunities for choices.					
Multiple learning alternatives are available to address different learning styles of students.					
Students' work is assessed in terms of their past achievements and their own potentials.					
Parents are involved (either actively or indirectly) with the classroom community.					

15. How often you use the following resources to plan your instruction? *(Make one check for each resource.)*	Almost Never	Seldom	Occasionally	Frequently	Almost Always
Content standards and benchmarks					
Teacher manuals					
Student textbooks					
Internet					
Computer software					
Content area resources					
Resources on teaching techniques					
Audiovisual resources					
Staff development materials					
Materials from conferences					
Other *(Please name and rate the frequency.)*					

16. To what degree do you feel prepared with the necessary skills and knowledge to teach the following? *(Make one check for each category.)*	No Preparedness	Some Preparedness	Much Preparedness	Great Deal of Preparedness
State Language Arts Standards				
State Dakota Mathematics Standards				
MSD Health Standards				
Science				
Social Studies				
Native American students				
High poverty students				
In multiage classrooms				

17. Listed below are topics of professional development activities, many of which have been offered to teachers in MSD. For each topic, please respond to questions A and B. *(Note- if you participated in an activity, but not at MSD, you should circle Yes and answer question B .)*

Staff Development Topics	A. Did you participate ? *(Circle Yes or No)*	B. If you participated, how effective was participation at enhancing your teaching skills? *(Check one answer for each topic.)*			
		No Value	Some Value	Much Value	Great Value
Teaching in Multiage Classrooms	Yes No				
Adapting Curriculum in Multiage Classrooms	Yes No				
Content Standards	Yes No				
Classroom Grading/Assessment	Yes No				
Math Instruction	Yes No				
Reading Instruction	Yes No				
Writing Instruction	Yes No				
Integrated Thematic Units	Yes No				
Learning Centers	Yes No				
Cooperative Learning	Yes No				
Collaborative Teaming	Yes No				
Team Building Techniques	Yes No				
Differentiated Instruction	Yes No				
Learner-Centered Practices	Yes No				
Using Technology in the Classroom	Yes No				
Computer Skills Training	Yes No				
Lakota Language/Culture	Yes No				
Multiple Intelligences	Yes No				
Student Motivation Techniques	Yes No				
Health	Yes No				
Special Education	Yes No				
Other *(Please describe and indicate the value.)*	Yes No				

18. Indicate your need for additional staff development on the following topics by *rating each from 1 (definitely not needed) to 4 (definitely needed).*

___ Teaching in Multiage Classrooms
___ Adapting Curriculum in Multiage Classrooms
___ Content Standards
___ Classroom Grading/Assessment
___ Math Instruction
___ Reading Instruction
___ Writing Instruction
___ Integrated Thematic Units
___ Learning Centers
___ Cooperative Learning
___ Collaborative Teaming
___ Team Building Techniques
___ Differentiated Instruction
___ Learner-Centered Practices
___ Using Technology in the Classroom
___ Computer Skills Training
___ Lakota Language/Culture
___ Multiple Intelligences
___ Student Motivation Techniques
___ Health
___ Special Education
___ Other (Please Describe)

19. How long have you been teaching multiage classrooms in MSD?

___ none (If none, go to question #22.)
___ first year of teaching a multiage classroom
___ second year of teaching a multiage classroom
___ third year of teaching a multiage classroom
___ Other *(Please explain.)*

20a. What are the advantages of multiage classrooms?

20b. What are the disadvantages of multiage classrooms?

21. In general, what is the degree of improvement that you have seen in your students in the following areas since you started teaching a multiage classroom?	No 'mprovement	Very Limited Improvement	Some Improvement	Much Improvement	Great Improvement
student learning skills					
student motivation to learn					
student interpersonal relationships					
student respect for community					
student decision making					
student cultural understanding					

22. How long have you been looping in MSD?

____ none (If none, go to question #24.)
____ one year
____ two years
____ three years
____ four or more years
____ Other *(Please explain.)*

23a. What are the advantages of looping?

23b. What are the disadvantages of looping?

24. In general, what is the degree of improvement that you have seen in your students in the following areas since you started looping?	No Improvement	Very Limited Improvement	Some Improvement	Much Improvement	Great Improvement
student learning skills					
student motivation to learn					
student interpersonal relationships					
student respect for community					
student decision making					
student cultural understanding					

Please answer the following demographic questions:

25. Current position: _____ Teacher _____ Other Certified Staff

_____ Other *(Please describe.)*

26. Number of years teaching experience: _____

27. Number of years teaching in Monroe School District: _____

28. Grade level(s) that you *currently* are teaching in *1999-2000*: _____

29. Grade level(s) that you taught *last year* in *1998-1999*: _____

30. Grade level(s) that you taught in *1997-1998*: _____

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31. What are your suggestions for improving instruction and student learning in MSD?

Appendix C

Monroe School District, South Dakota
Design Team Study of Instructional Practices
December 1999

Dear MSD Administrator:

The administrator interviews are part of the MSD Design Team's Instructional Practices Study. The purposes of the study are:

- to identify the instructional practices that are being used in MSD
- to obtain feedback from MSD staff on the effectiveness of these instructional practices
- to relate current instructional practices to student learning outcomes
- to obtain input on needed staff development
- to provide recommendations regarding district improvement plans

The Instructional Practices Study will not be used in any way to evaluate personnel. Instead, the data will be used to inform only the five purposes stated above. The Design Team also recognizes the sensitive nature of the data that are being collected and pledges to protect the confidentiality of all respondents. Interviews will be tape recorded to enable consultants to provide an accurate analysis for the report. If at anytime you feel uncomfortable and you wish to stop the recording during this interview, please request this and we will respect your wishes. With regard to any sensitive data collected for this study, it will be kept in a secure file at McREL and will not be shared with any other persons. It should be noted also that although demographic information is being collected on teachers and administrators, report of results will be designed to avoid possible identification of respondents. The interview will take approximately one hour to complete. Please sign the bottom of this sheet and give it to Dorothy Aguilera, educational consultant, McREL.

Thank you for your participation in this important study. We hope to have the results available to share with everyone in February.

I agree to participate in the Interview for the MSD Instructional Practices Study. I have been informed about the purposes of the study and that the confidentiality of my responses will be protected. I understand that completing the survey will take approximately one hour.

Name (Print) _____

Name (Signature) _____

Date _____

Administrator Interview

Name of School: _____ Name of District: _____

Person Interviewed: _____ Person Conducting Interview: _____

Time of Interview _____ Ending Time of Interview: _____

General:

1. How long have you been at the school district?
2. Have there been any significant changes recently? What are those changes?
3. What are your goals for this school year? How will you know if you have attained your goals?
4. What are the district's short term and long term plans for school improvement?

Classroom Organization: These questions are designed to discover the number of teachers and schools who utilize looping, multiage and other structures in MSD.

1. Please describe the different ways teachers organize their classrooms?

multiage _____	looping _____	family _____
multiage _____	looping _____	family _____
multiage _____	looping _____	family _____
multiage _____	looping _____	family _____
multiage _____	looping _____	family _____
multiage _____	looping _____	family _____

2. How well do you think teachers understand and practice effectively these organizational approaches?

3. What percentage of schools are utilizing which types of approaches (multiage, looping, and family/pod) in the district?

multiage _____	looping _____	family _____
multiage _____	looping _____	family _____
multiage _____	looping _____	family _____
multiage _____	looping _____	family _____
multiage _____	looping _____	family _____
multiage _____	looping _____	family _____

4. How often do principals observe in classrooms?
5. How are teachers assessed?

Professional Development:

1. What is the district doing to enhance the professional development of staff this year?

2. What additional resources has the district provided to teachers and principals as incentives to incorporate new and alternative approaches in their classrooms? Such as planning time, professional development.

3. What opportunities do teachers have to learn from each other?

4. If I'm a new teacher in the district, what kinds of assistance can I expect to receive?

6. What professional development needs do staff have that aren't currently being met by the district?
7. In terms of improving instruction and student learning (teaching and learning practices) are there any unique needs in schools?
8. How effective has professional development been with improving teaching and learning practices at your school?

Improving Teaching and Learning Practices:

1. What teaching and learning practices are currently being utilized in your school/s?

2. What are the most effective instructional practices used by teachers?
3. What types of student assessment is the district using?
4. What instructional practices have proved to solicit the best learning experiences for students?
5. How much time do teachers spend each week for planning?

Curriculum and Instruction, and Standards:

1. How were decisions made about which reading materials and instructional strategies would be used at your school/district? What about assessments?

2. How do you know if curricula and instructional strategies are working to help your students achieve your school/district goals? Should other classroom approaches be offered by the district at your school? What suggestions do you have?

3. In what ways are students grouped for instruction based on academic ability? For instance, are students grouped by ability for reading instruction or are students who meet gifted/talented criteria given different curriculum? What parameters exist in the grouping in your school? Are there any differences in what each group is expected to achieve by the end of the year?

Principal Interview

Name of School: _____ Name of District: _____

Person Interviewed: _____ Person Conducting Interview: _____

Time of Interview _____ Ending Time of Interview: _____

General:

1. How many students are enrolled this year? Size of teaching staff? Turnover of staff ?

2. How long have you been at this school?

3. Have there been any significant changes at the school recently? What are those changes?

4. What are your goals for this school year? How will you know if you have attained your goals?

Classroom Organization: These questions are designed to discover the number of teachers and schools who utilize looping, multiage and other structures in MSD.

1. Please describe the different ways teachers organize their classrooms in your school/s?

grade level _____	multiage _____	looping _____	family _____
grade level _____	multiage _____	looping _____	family _____
grade level _____	multiage _____	looping _____	family _____
grade level _____	multiage _____	looping _____	family _____
grade level _____	multiage _____	looping _____	family _____
grade level _____	multiage _____	looping _____	family _____

2. How well do you think teachers understand and practice effectively these organizational approaches?

3. What percentage of classrooms are utilizing which types of approaches (multiage, looping, and family/pod) in your school?

grade level _____	multiage _____	looping _____	family _____
grade level _____	multiage _____	looping _____	family _____
grade level _____	multiage _____	looping _____	family _____
grade level _____	multiage _____	looping _____	family _____
grade level _____	multiage _____	looping _____	family _____
grade level _____	multiage _____	looping _____	family _____

4. How often do you observe in classrooms?

Professional Development:

1. What are you doing to enhance the professional development of your staff this year?

2. What additional resources has your school/district provided to teachers and principals as incentives to incorporate new and alternative approaches in their classrooms? Such as planning time, professional development.

3. What opportunities do teachers have to learn from each other?

4. If I'm a new teacher at this school, what kinds of assistance can I expect to receive?

5. What professional development needs do your staff have that aren't currently being met by the district? In terms of improving instruction and student learning (teaching and learning practices) are there any unique needs in your school?

6. How effective has professional development been with improving teaching and learning practices at your school?

Improving Teaching and Learning Practices:

1. What teaching and learning practices are currently being utilized in your school/s?

2. What are the most effective instructional practices used by teachers?

3. What types of student assessment are you using at your school?

4. How do you know they are making adequate academic improvement each year?

5. What instructional practices have proved to solicit the best learning experiences for students?
6. How much time do your teachers spend each week for planning?
7. Do you request lessons plans from teachers? How often? Do teachers actually turn in their lesson plans as requested?

Curriculum and Instruction, and Standards:

1. How were decisions made about which reading materials and instructional strategies would be used at your school/district? What about assessments?

2. How do you know if curricula and instructional strategies are working to help your students achieve your school/district goals? Should other classroom approaches be offered by the district at your school? What suggestions do you have?

3. In what ways are students grouped for instruction based on academic ability? For instance, are students grouped by ability for reading instruction or are students who meet gifted/talented criteria given different curriculum? What parameters exist in the grouping in your school? Are there any differences in what each group is expected to achieve by the end of the year?

4. In your opinion, what works best in your school for students?

5. How do you assess teachers to determine if they are utilizing the best teaching and learning practices in their classrooms?

6. How well are the curriculum and instructional practices meeting the standards in your school/s?
7. What curriculum resources are available in your schools? Which resources do teachers most often use?
8. How is technology being utilized in classroom instruction?
9. What textbooks and resource materials are teachers currently using in your school?
10. What percentage of teachers use worksheets in their classrooms?

Families and Communities:

1. What does parent involvement look like at your school?
2. In what ways do community organizations, businesses, and agencies participate in your school/s?
3. What are some strategies you're currently using to initiate family and community involvement?
4. Do you know what's worked in the past?

Tribal Culture

1. What tribal affiliations are represented in your school community?
2. How does tribal culture influence teaching and learning practices? Assessment?
3. What are the cultural issues that most often surface in the school?
4. Do teachers receive additional professional development specific to the tribal community they teach in?
5. What is the relationship between the tribal office and schools?
6. Is there an educational office within the tribal government structure?
7. What tribal representation is there on the school board?
8. Does the tribe request any specific education be offered at the school such as language and cultural history?
9. Is there anything else you would like to add?